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GENERAL NOTES.

The New Star in Gemini.—This nova was discovered by ENEBO at Dombaas, Norway, on March 13th, and as it is the brightest which has appeared for a number of years, promises to be an interesting subject for study, and to afford valuable contributions to our knowledge of these important and rather puzzling objects. For a few days it was considerably brighter than the fourth magnitude, but has rapidly declined, so that at present (March 20th) it is between the fifth and sixth magnitudes. Its approximate position for 1912.0 is:—

$$\alpha = 6^{\text{h}} 49^{\text{m}} 12^{\text{s}}, \delta = + 32^{\circ} 15' 5''$$

It forms a small, nearly right-angled triangle with *Theta Geminorum* and a small star south of *Theta*.

According to telegraphic information from Harvard College Observatory, its spectrum was at first of Type F5, but has since changed to the typical nova spectrum showing bright lines, a point of very great interest in forming hypotheses as to the cause of these sudden outbursts of light.

Spectrographic observations made by Professor WRIGHT give a bright line spectrum, but showing some differences from the typical nova spectrum. Long exposures made with the Crossley reflector afford no evidences of surrounding nebulosity.

The important position as incumbent of the Chair of Mathematics at Edinburgh University, made vacant by the death of Professor CHRYSTAL, has been filled by the appointment of Mr. E. T. WHITTAKER, M. A., F. R. S., -etc., Royal Astronomer of Ireland. Professor WHITTAKER is the author of numerous works in the mathematical and physical sciences, of which perhaps the best known are his "Course of Modern Analysis," "The Theory of Optical Instruments," and "A History of the Theories of Æther and Electricity from the Age of Descartes to the Close of the Nineteenth Century."

At the recent annual general meeting of the Royal Astronomical Society the society's gold medal was presented to Mr. A. R. HINKS for his work in connection with the deter-

mination of the solar parallax from observations of the minor planet *Eros*. Mr. F. W. DYSON was re-elected President of the society.

Comet SCHAUMASSE (1911 *h*) turns out to be a member of *Jupiter's* comet family, having a period of 7.058 years, according to elements derived by FAYET. There is some resemblance in the elements to those of Comet 1894 I (DENNING).

Bulletin No. 2 of Helwân Observatory deals with the brightness of Comet Halley as deduced from the Helwân observations; the visual magnitudes average about one magnitude brighter than the photographic.

Comet WESTPHAL (1852 IV), whose period is about sixty-two years, is due to return within the next year or two. The date of its return cannot be predicted more certainly than this because of the uncertainty as to the exact length of its period. HNATEK finds, however, that on any reasonable assumption as to its period it will in any event be quite faint, and probably too far south to be searched for by observers in the northern hemisphere.

Some preparations are being made by European observatories to observe the coming annular-total solar eclipse on April 17th. The path of the eclipse starts on the coast of Guiana, passes over the northwest corner of Spain, almost over Paris, and ends in Russia. It will be total, if at all, only in Spain and Portugal. Even here the calculated duration of totality will be only 1.6 seconds, and there is some possibility that it may not reach this length. So nearly on the border line between the annular and total class is this eclipse that one writer has stated that it may well be said that it will at its greatest obscuration be *neither* annular nor total, for the lower parts of the Moon's mountainous limb will let some sunlight pass, while in other places on the limb the higher lunar formations will give total obscuration. So narrow is the path that the latitudes of the stations selected must be determined

with considerable care. A much more favorable total eclipse will be that of October 10th, which will pass over the rich and populous State of Sao Paulo in Southern Brazil; its maximum duration will be a few seconds less than two minutes.

Professor ABBE of the U. S. Weather Bureau has been awarded the Symons gold medal of the Royal Meteorological Society for his distinguished work in connection with instrumental, statistical, and dynamical meteorology and forecasting.

Mr. CHARLES G. ABBOT, director of the Smithsonian Astrophysical Observatory, has returned to Washington from Bassour, Algeria, where he has been making astrophysical observations in regard to the solar constant of radiation. The observing station in Bassour was established in July, 1911, when Mr. ABBOT and his field assistant, Professor F. P. BRACKETT, of Pomona College, arrived in Algeria, and observations were continued till the end of November. From previous work at Washington, Mt. Wilson, and Mt. Whitney, it has been determined that the Sun was probably a variable star, and that apparently its radiations frequently fluctuated from two to five per cent during irregular periods of from five to ten days' duration. Although strongly indicated by the work on Mt. Wilson, the result was so important that it seemed necessary to test it further by means of simultaneous independent observations held at Mt. Wilson and some other high-altitude station remote from there, where an equally cloudless atmosphere existed. These duplicate observations would eliminate all errors due to local atmospheric conditions. Mr. ABBOT made complete determinations of the solar constant for forty-four days in Bassour, while his assistant, Mr. L. B. ALDRICH, made similar measurements at Mt. Wilson, California. The two observing stations were separated by a distance nearly equal to that of one-third the circumference of the Earth. Unfortunately some cloudy weather was encountered at each of the stations, but the record of about thirty days will be available for comparison. If it seems necessary to make additional measurements, it will be possible to continue the work this year during June, July, and August.—*Science*, February 2, 1912.

As is generally known, the wireless station on the Eiffel Tower has for some time been sending out time signals for the use of navigators and others. These signals are sent out twice a day, at 10:45 A. M. and 11:45 P. M. To this service has now been added the sending out of four wireless weather bulletins daily. Three of these are simply local dispatches giving the state of the weather at the summit of the tower; the main message is sent out directly after the morning time signal and the data for it are given by the French Weather Bureau. This message follows a condensed code which is very easily translated and gives the barometric pressure, the direction and the force of the wind, and the state of the ocean at the six following stations: Reykiavik, Iceland; Valentia, Ireland; Ouessant, France; Horta, Azores; La Corona, Spain, and Saint-Pierre-et-Miquelon, Newfoundland. For the first five of these stations the meteorological data are those at 7 A. M. of the same day, for the last-named at 8 P. M. of the preceding day. The value of such signals to navigators is too obvious to require comment. Fairly successful determinations of longitude have already been made by wireless, and it requires no very great stretching of the imagination to look into the future to that day when Greenwich time will be signalled daily to the entire world from some central station.

Favorable Future Oppositions of Mars.—Interesting diagrams are given by BALDET in the *Bulletin de la Société Astronomique de France* for February, 1912, showing the relative disk of *Mars*, and hence the favorable or unfavorable character of the opposition, till the year 1950. All oppositions till 1922 will be rather unfavorable, that of 1916 showing a disk only one-fifth of that at the most favorable oppositions. In August, 1924, however, will occur an opposition of maximum brilliancy, easily the best during this half century.

Astronomer's Jubilee.—Many distinguished savants met in Paris on February 26th to celebrate what may be termed the scientific jubilee of M. CAMILLE FLAMMARION, the popular writer on astronomy and the director of the Juvisy Observatory, as he brought out his first work, entitled "La Pluralité

des Mondes Habités," just fifty years ago, when he was twenty years old. Very kind addresses were delivered by the chief among his many admirers at the large meeting held at the Hôtel des Sociétés Savantes, and M. FLAMMARION was presented, in commemoration of the happy event, with a large silver medal, in which he is depicted standing on a cloud, with his observatory on one side and the planet *Mars*, to the study of which he has devoted so much of his time, on the other.—From the *London Daily Telegraph*.